

# Notice of Allowability

Application No.

10/577,717

Examiner

Ephrem Alemu

Applicant(s)

MAKIMURA ET AL.

Art Unit

2821

## -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 5/02/2006.
2. ☒ The allowed claim(s) is/are 1-8.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All b) ☐ Some\* c) ☐ None of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

### Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date 5/02/2006
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

THUY V. TRAN  
PRIMARY EXAMINER

## DETAILED ACTION

### *Drawings*

1. The drawings received on 5/02/2006 are acceptable.

### *Allowable Subject Matter*

2. Claims 1-8 are allowed.
3. The following is an examiner's statement of reasons for allowance:

Miyazaki et al. (US 7,064,494) discloses a discharge lamp operating apparatus for operating a discharge lamp and a self-ballasted electrodeless discharge lamp. Alexandrov (US 6,906,473) discloses an electronic ballast having a feedback circuit for operating an electrodeless discharge lamp. Shoji et al. (US 6,222,327) discloses a lighting circuit for supplying AC current to an electrodeless fluorescent lamp. Statnic (US 5,962,987) discloses an operating circuit having a power switching system, load circuit and drive circuit for operating an electrodeless discharge lamp.

However, the prior art of record fail to teach or suggest, alone or in combination, the limitations: "a resonance circuit that has a resonance characteristic and receives said high frequency power to provide high frequency power varying in response to said operating frequency based on the resonance characteristic, the resonance characteristic being a characteristic in which a first resonance curve with a resonance peak at a prescribed resonance frequency in a start mode is shifted to a second resonance curve lower than the first resonance curve in a lighting mode, the start mode being a mode before an electrodeless discharge lamp lights, the lighting mode being a mode while the electrodeless discharge lamp is lighting; an induction coil that: generates high frequency electromagnetic field in response to the high

frequency power provided through the resonance circuit; and induces high frequency power to the electrodeless discharge lamp by applying the high frequency electromagnetic field to the electrodeless discharge lamp; a start circuit that, when the electrodeless discharge lamp is started, sweeps down or up the variable power so as to sweep the detection voltage while sweeping down the operating frequency from a prescribed start frequency higher than the resonance frequency to a prescribed end frequency lower than the start frequency; a control circuit that increases or decreases the variable power so that the detection current comes to equal a prescribed current for shifting the operating frequency to a middle range frequency between the start frequency and the end frequency, the prescribed current being set so that the detection voltage in case of the middle range frequency becomes lower than that in case of the end frequency; and a suppression means that starts suppression of the control circuit's operation when the electrodeless discharge lamp is started, and then holds the suppression during at least the start mode" as claimed in claim 1. It is for these reasons in combination with all the other limitations in the independent claim 1, that claims 1-8 are allowable over prior art of record.

### ***Conclusion***

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

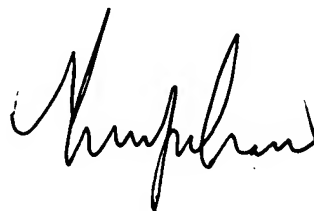
*Correspondence*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ephrem Alemu whose telephone number is (571) 272-1818. The examiner can normally be reached on M-F 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas W Owens can be reached on (571) 272-1662. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

EA  
1/02/08



THUY V. TRAN  
PRIMARY EXAMINER